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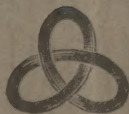


BY

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ON THE INCREASING PREVALENCE OF SCABIES,

WITH REMARKS UPON TREATMENT.¹

BY JAMES C. WHITE, M.D.,

Professor of Dermatology in Harvard University.

THE great increase in the prevalence of scabies in and about Boston during the last four or five years leads me to ask your brief attention to the subject. The disease has exhibited marked fluctuations in frequency of occurrence in this community since my student days. During that period of three years passed in the Tremont Medical School, and the lecture seasons of the University, 1853-1856, I do not remember to have seen a case; so that I might have entered practice after receiving the degree of doctor of medicine without being able to recognize the disease. In the immediate continuation of my study in Europe, where the disease was almost a normal condition of life among the lower classes, and where, in the vast standing armies, soldiers were treated for the affection by the regiment at a time, abundant opportunity offered to become familiar with it in all its possible manifestations. On my return I found that it did occur more frequently than it was recognized amongst us, although rarely. But with the breaking out of the war of the Rebellion, three years subsequently, it became after a time very prevalent among the soldiers, probably through the enlist-

¹ Read before the Boston Society for Medical Improvement, Jan. 28, 1889.



ment of recent immigrants and the favoring conditions of camp life, and later was established as a general epidemic in our armies over their vast field of operations. But so little were army and volunteer surgeons acquainted with the disease and its management that they regarded it as an unknown affection "defying nomenclature and classification." In replying in an editorial article to this opinion, thus expressed in various communications from the army at that time, I was taken to task for the statement that "I have examined a great many cases of 'army itch' in returned soldiers and their families, and do not hesitate to express the opinion that it is simply scabies, that it is always caused by the itch insect, and that it readily yields to proper external treatment." The soldiers brought it home with them on furlough and after discharge from service, and thus it became a wide-spread epidemic, affecting all classes of society.

At that time, 1864, I was led to make an extended communication on its recognition and treatment to this society.

Gradually, however, under our cleanly ways of family life, so unfavorable to its development and spread, the disease disappeared again almost wholly, from this portion of our country at least. It would revive to a noticeable extent at times when immigration became most active, getting a temporary lodgment in this or that factory town through newly arrived operatives, or in a city family through a recently imported nursery girl, or a school-fellow, but nowhere a persistent or endemic existence. The stock or material for clinical teaching was mainly dependent upon a renewed supply from European sources, and for several years was kept up principally by returned cattle-drovers. As will be seen

by the following figures, there have been years recently when the class graduating from our medical school had little better clinical means of studying the disease than I had in my pupilage. I give the number of cases treated yearly in the outpatient department for skin diseases of the Massachusetts General Hospital since its establishment twenty years ago:—

In 1869.....50 cases	In 1879..... 15 cases
1870.....22 "	1880..... 9 "
1871.....30 "	1881..... 9 "
1872.....20 "	1882..... 25 "
1873.....24 "	1883..department closed.
1874.....17 "	1884..... 68 cases.
1875..... 8 "	1885..... 98 "
1876.....35 "	1886.....105 "
1877..... 2 "	1887.....123 "
1878.....11 "	1888 . . .165 "

It must be observed that this last number, 165, by no means indicates the real number of cases which might be included in the returns, for in the majority of instances the patient applying for relief was only one of several members of a family who were also treated for the same affection. Generally it is only one child out of several which is brought for treatment,—the one most seriously affected. These patients reside only in part in Boston; they come also from towns within a radius of fifteen or twenty miles distant. They are not only the poor and dirty, but are in considerable proportion from the fairly well-to-do classes, and of cleanly habits.²

There has been also a proportionate increase in the number of cases occurring in my private practice. Whereas it has been previously rare to treat more than one or two patients with the disease

² Dr. Greenough in 1887 called attention to a similar increase in the frequency of the disease at the Skin Department of the Boston Dispensary.

a year, I have seen at my office in 1885 eleven cases, in 1886 fourteen cases, in 1887 eight cases, and in 1888 eighteen cases.

It is impossible to find a satisfactory explanation of this great increase in the prevalence of scabies in this vicinity. Immigration has not been especially large in the past few years, nor has there been any noticeable change in the ways of living, or more intimate intercourse between various classes of society, which might possibly account for it. In European countries it is the close relations of barrack life in the vast standing armies, the corresponding possibilities of bodily contact connected with apprentice life, and the general disregard for personal cleanliness, which afford such facilities for the spread and continuance of the disease, conditions which fortunately do not exist in the United States. It is not impossible that the crowding of great numbers of operatives of both sexes in the large working establishments of our cities, and the multiplication of commercial travellers, traversing all parts of our country, new features in our social life, may present more favoring chances for the development of the disease than formerly existed. The direct channels of communication from individual to individual most commonly recognized are between schoolmates, nurse and child, bed-fellows, artisans, operatives, shop-girls, and through family intercourse, and impure sexual contact.

Treatment. — I wish to add a few words about the choice and use of remedies. The old methods of cure employed in my student days in foreign hospitals may still be relied upon, but they have been superseded in most part by others more gentle in action and as effective. Helmerich's salve, more

or less modified, was chiefly used in France. The original formula was: flowers of sulphur, two parts; subcarbonate of potash, one part; lard, eight parts. Prof. Hardy used lard, three hundred parts; sulphur, fifty parts; subcarbonate of potash, twenty-five parts. In his "quick cure" at the Saint Louis Hospital the patient was rubbed all over with soft soap for half an hour; he was then kept in a hot bath for half an hour; and during the third half-hour he was rubbed everywhere with this ointment. He was then dismissed. Bazin used Helmerich's salve unchanged, and two frictions instead of one. Relapses after these quick cures were frequent.

In Germany Wilkinson's ointment was for a long time used. As modified by Prof. Hebra its formula was: \mathcal{R} . Sulph. venal., ol. fagi, āā \mathfrak{z} vi, sapon. viridis, adipis, āā libram, cretæ, \mathfrak{z} iv. M. An equal quantity of alcohol was sometimes substituted for the lard. They were employed as follows: The patient was put into a warm bath, where he remained for half an hour. Then a piece of coarse blanket was smeared with sapon viridis, and with it every portion of the skin was thoroughly rubbed. This was washed off in the bath, the skin was dried, and then rubbed with the ointment or tincture. This process was repeated on the following and each successive day until the itching ceased. Later Vlemingcx' solution (made by boiling two parts of flowers of sulphur and one part of caustic lime in twenty parts of water until twelve parts remain, and then filtering) was wholly employed by Hebra. This was rubbed with a woollen cloth into the whole surface of the body for half an hour. The patient then was kept in a warm bath for an hour, subsequently sponged off with pure water, and dismissed. This is a very effective remedy, but

if used incautiously it is sure to aggravate the eczematous inflammation which always accompanies the disease. Three or four days is, however, a much safer period to keep the patient under observation and treatment.

In 1864 Bärensprung demonstrated in the Berlin hospitals the value of Peruvian balsam as a parasiticide in this disease, and in the following year styrax was employed there for the same purpose. Their essential and active principles are identical, viz., cinnamin and cinnamic acid. The former contains them in larger proportion, but the latter is cheaper. In the Peruvian balsam the itch insect dies in twenty to thirty minutes, whereas in styrax it may live from two to five hours. The method then employed was to rub the balsam, or the styrax softened with olive oil, four parts of the former to one of the latter, over the whole surface at night. For greater certainty of effect this process was generally repeated after some days. The application of these substances to the skin produces no irritation.

Naphthol was introduced into the therapeutics of scabies by Kaposi in 1881. He employed the following formula: β -naphthol, fifteen parts; green soap, fifty parts, powdered chalk, ten parts; lard, one hundred parts. This preparation was rubbed into all affected parts twice in the period of twenty-four hours. He demonstrated the fact that the disease could be cured in this way with certainty and safety.

In sulphur, styrax or peruvian balsam, and naphthol we have three effective, sufficient parasitocides. The action of the other substances employed so generally in combination with them, as above mentioned, the alkalies, tars, gritty powders, etc., is simply auxiliary, and addressed to the solvent or

mechanical removal of the epidermal coverings, or crusts, which protect the animals and eggs in the burrows and pits against the active agents, or for the relief or prevention of the inflammatory processes, which always accompany the disease, or may be provoked by the injudicious use of the remedies employed in its cure. It may be said that it is in a proper knowledge of these latter, most essential, points of treatment that the successful management of scabies chiefly consists. It should never be forgotten that every case of advanced scabies is mainly an eczema, developed, in extent of surface affected and intensity of lesions, by individual peculiarity of the cutaneous tissues under the influence of scratching, and that the changes in the skin due to the direct action of the parasite are always but a small practical part of the same. The mere destruction of the animal in all its phases may be, therefore, but a part only of treatment, although always the first and essential step. It is important therefore, firstly, that in the choice or combination of remedies we select those which shall destroy the animal with certainty and quickness, and yet shall not aggravate the existing inflammatory changes in the skin; and secondly, that we do not use them too long.

I generally employ in dispensary practice the following method, and may say in advance that it is applicable in every case, however extensive or severe may be the accompanying inflammatory processes. I prefer a mixture of the three active agents (a scattering shot), and combine them in this way. \mathcal{R} . Sulph. flor. $\mathfrak{z}\text{ii}$, β -naphthol $\mathfrak{z}\text{i}$, balsam Peruv., vaseline, āā $\mathfrak{z}\text{i}$. \mathcal{M} . This quantity is generally sufficient for the cure of a single case. The patient is directed to rub a third of

this mixture into the whole surface of the body, from the neck downwards, at bedtime. He is especially told to rub it between the fingers and upon the penis, and that it must be applied to the back by some other person. He is to sleep in old garments, that the bedclothes may not be soiled. In the morning the skin is to be thoroughly washed with soap and water. The use of the bath in this class of patients is of course out of the question, nor is it essential. The ointment is to be used in this way for three consecutive nights. Generally the itching ceases almost wholly on the first application. The patient is also told not to use it after the third night, unless, after waiting two more nights, there should be a decided return of the pruritus here or there, in which case the salve is to be rubbed into such parts only, and only for two nights running. For very young children I omit the naphthol in prescribing the ointment, on account of its occasional irritating properties.

In cases where the accompanying eczema is severe, it is well to require an inspection of the patient again on the sixth or seventh day, when it will sometimes be found necessary to direct a course of treatment addressed to this residuary condition. A very frequent mistake on the part of the physician or patient at this stage is the conclusion that the appearances, or accompanying itching, are signs of the continued activity of the original affection, and the consequent renewal of the use of the stimulating parasiticide, which only aggravates the existing process. I have often seen cases of post-scabietic eczema in dispensary and private practice, which have been kept going for months by such errors of judgment. It must also be remembered that in prolonged cases of itch

the cutaneous nerves have acquired, as it were, the habit of demanding to be scratched, and seem to require it for a long time after every visible sign of the disease has disappeared, and these cases of surviving pruritus are often mistaken for remaining evidence of the original affection, and mis-treated accordingly.

Directions are always given that on the first night of the treatment all the clothes which have been worn next to the skin, — shirts, drawers, and socks, and the sheets and pillowcases last slept in, — shall be thoroughly boiled before being used again. Gloves should be baked or destroyed. It is to be assumed that every bed-fellow has the disease also, and requires treatment as much as the patient. Every member of the family should also be inspected and treated in the same way, however slight in character or extent may be the indications of the affection. I have seen the disease keep up a continued and alternating existence in a large family for a year, during which period nearly all its members underwent treatment one or more times, simply because they were not treated simultaneously. I have recently directed five members of a private family to be thus generally treated, although only two of the household at that time presented any positive indications of the presence of the disease.

As to the more general control of the affection in its well-nigh epidemic state of prevalence, it is only by drawing the attention of the profession to this activity, and to the best methods of destroying it in individual instances, that we may hope to accomplish anything, and it is for this purpose that I offer this brief contribution to your notice.

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